

THE SUPPOSED CURATIVE EFFECT OF OPERATIONS *PER SE*.

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FOR some time I have had the idea of collecting and analyzing the various cases recorded in the journals and elsewhere in which intelligent surgeons, having operated for the relief of symptoms depending upon a supposed pathological basis, have found no such condition, and yet the patient recovered not only from the operation, but from the original ailment. My attention was first directed to this subject by reason of my experience (which I shall presently summarize) with the operation of trephining for so-called traumatic epilepsy, but the investigation begun in that line finally came to include all such cases as I have just described. I shall consider, *A*: The recorded cases, and *B*: The possible explanations of the phenomenon observed.

A: It has been very difficult properly to classify the cases in question, but, roughly speaking, they may be divided into three groups in accordance with the anatomical seat of the symptoms or of the supposed disease. This will bring them under the following heads: I. Operations for the relief of nervous phenomena, as epilepsy, insanity, paralysis, etc. II. Operations for abdominal and pelvic disorders, as peritonitis, tumors, etc. III. Miscellaneous operations.

They may be again divided into (*a*) Those in which nothing whatever was found explanatory of the symptoms. (*b*) Those in which some departure from normal conditions was observed, but was so slight as to be apparently inadequate to explain the symptoms. (*c*) Those in which an apparently grave and irremediable condition was disclosed by an exploratory operation, but notably improved or altogether disappeared after mere inspection or handling, no further surgical interference having been thought justifiable.

OPERATIONS FOR VARIOUS CEREBRAL SYMPTOMS, CHIEFLY EPILEPSY, IN WHICH LITTLE OR NOTHING WAS FOUND TO ACCOUNT FOR THE SYMPTOMS, BUT EITHER MARKED BENEFIT OR CURE FOLLOWED. TABLE I.—TREPHINING.

Operator and Reference.	Age and Sex.	Supposed Cause, and Character of Fits.	Operation.	Conditions Found.	Result.—Time between Operation and Report.	Remarks.
J. Lucas Championnière.— <i>Four d'opérations de chir. prat.</i> , Paris, 1868, 296.	40	Fell at age of 14 years; left painful spot on head. Had convulsions (epileptoid) and over 2 years' great pain in head and vertigo.	Trephined.	Nothing abnormal; dura slightly adherent.	Cured.	Immediate cessation of pain and vertigo which did not return.
"	45	" Blow on head from hatchet at 8 years; no symptoms until 41. Since then, excruciating pains in left side of head. Tenderness in spots over head.	Trephined May 3, '86. Again Jan. 26, '87. Again July 1, '87.	No lesion found. Notes on.	"	Pain at that spot ceased, never to return. Pain in face disappeared, but returned again, and greatly improved.
"	35	" Fell 3 months ago. Great pain in head ever since.	Trephined Aug. 19, 1884; again March 24, 1887.			Temporary relief, 2 months later vertigo returned. Complete relief for one year; later, vertigo returned, but was not troublesome.
"	"	" Blow on head 2 months ago. Since then, pain at point of injury, vomiting and vertigo.	Trephining.	No sign of fracture of skull.	Cured.	Complete relief which has been permanent.
"	29	" Recent contusion median line of head. Pain at middle of both parietals.	Trephined.	No local disease could be found.	Complete cure.	
Dr. S. N. Leo.— <i>Journal Nerv. and Ment. Dis.</i> , N. Y., 1883, p. 271.	40	" Had 14 characteristic fits in 4 hours from blow received some time before (?)	"		Cured. Two years.	Fits gradually ceased; "free now for 2 years."
Mr. A. Poland.— <i>Med. Times and Gazette</i> , Sept. 26, 1868.	Boy.	" Severe epileptic form convulsions and unconsciousness following blow on head.	"		"	Recovered completely.

Horsley, —Brit. Med. Jour., April 23, '87.	4	M. 3 to 14 fits daily; almost complete paralysis in right arm and leg, semicomatose.	Trephined; brain explored by incision.	Nothing abnormal found.	Cured.	Rapid recovery; no harm from incision of brain; no fit for 1 month, then slight ones, none since.
Thos. Oliver, M.D. —Brit. Med. Jour., Feb. 4, 1888.	16	" Epilepsy following blow; several fits daily.	Trephined.	No disease of bone or membranes. Shortly after bone was removed, the dura began to bulge, it was incised and a few teaspoonfuls of serum containing flakes of lymph were discharged.	Cure for 6 months.	No fits for 6 months, after which slight relapse, attributed to bad hygienic conditions.
Peter de Marchettis —Quoted by Guthrie.		Epilepsy.	" "	No disease found.	Cured.	
Marechal —Quoted by Guthrie.		Epilepsy of several years standing.	" "	Nothing found.	"	
Alfred Poland, F.R.C.S. —Med. Times and Gazette, Sept. 26, 1868, p. 360.	14	" Head struck by end of wooden pestle; no wound was made. Headache followed 7 days, had twitches of muscles of hands; for about six weeks and more when he began to have fits and at times delirious and furious, and violently convulsed.	Trephining.	Everything normal. No depressed bone, no fracture, no appreciable disease of scalp bone or dura.	8 months.	Quite well, no more fits.
T. O. Edwards —Leavenworth Med. Herald, 1870-1, iv, 8, p. 1.	47	" Fell from carriage striking head; scalp wound only. Two years later, first convulsion, and continued in spite of medication.	Trephined.	Bone removed was thickened 1 to 3 lines.	Cured of fits. Two months.	Later paralysis came on and death 4 months after operation.
Dr. Eastman. —St. Louis Med. & Surg. Jour., 1881, xl, 572.	28 ?	" Light blow on head, stunning him for a time. One year later, appeared to be apoplectic, having tonic spells. Fits increased in frequency. No effect from any of all the treatment; as many as 16 or 18 daily.	" "	Small external depression was found on same side of head as paralysis, supposed to be seat of blow. Trephined head; nothing abnormal found.	Cure. Eight years.	Paralysis cured in 2 or 3 weeks and in 2 or 4 months entirely well. Never had a fit since.

TABLE I.—CONTINUED.

Operator and Reference.	Age and Sex.	Supposed Cause, and Character of Fits.	Operation.	Conditions Found.	Result. — Time between Operation and Report.	Remarks.
Benj. W. Dudley, — Transyl. M. J., '88, i, p. 19.	Middle age M.	Blow on head 15 years ago; intellect impaired; fits began 2 years later.	Trephined.	Dura and dura normal, but dura seemed to have fluid beneath. Pressing removed on 5th day; fluid all absorbed.	Improved. Some weeks.	Result very flattering for 2 weeks, but on account of indulging a craving appetite had recurrence, but milder and less frequent.
D. B. Lees and Edw. Bellamy, —Tr. Clin. Soc., London, '80-1, '81, xiv, 12.	Boys.	Blow on head with poker at 7; One year later had fits; fits at times very frequent.	" "	Dura natural but dura bulged.	Free from fits for 8 weeks.	Recurrence later.
Dr. Gay, —Bost. Med. and Surg. Jour., '82, cvi, 370.	16	Fell, striking head; no fracture; soon began to have fits, but free for 3 years. Two months ago without fresh cause began to have oppression and tenderness in certain spot in head. Could not sleep.	Trephining.	Dura and dura both normal.	Cured. Eight mos.	No fits since operation.
Mr. Bryant, reported by J. T. Dickson, —Bost. M. J. and S. Jour., '75, i, 790.	16	Falls 4 years. Fell, striking head, causing scalp wound only.	" "	Skull thickened; one-fourth inch at superior border; five sixteenths inch at inferior border.	Much improved. Four months.	Free from fits unless some unusual cause may excite a slight one.
Editor's Table, —San Francisco M. Press, '60-1, ii, 228.	28, 9	Injury on head 7 years ago. Mental faculties nearly destroyed, right arm nearly paralyzed and leg weak. Fits since injury, and unable to follow his work.	" "	Inner table of skull normal and not at all depressed.	Much improved for a time. Some weeks.	Free hemorrhage from scalp. Patient much improved at once. 7th day, secondary hemorrhage arrested only by deep stitches through flaps. This caused old symptoms to return. Bleeding continued for 3 weeks. Patient best at times of most bleeding. One week after, hemorrhage stopped, patient relapsed in former condition.

Dan. Ayres.—Trans. Brooklyn M. Chir. Soc.; Med. & Surg. Reporter, Phila., '64, vi, p. 356.	9	M.	Ten months before struck with stone on right frontal eminence causing lacerated wound; symptoms of con- vulsion; in 2 months change in disposition. Spells of ir- ritable temper and petit mal.	Trephined.	Hone and dura appeared absolutely normal.	Cure. Four and a half months.	Convulsions only on 3rd or 4th days [nurse had wrong- ly given him full diet.] Re- gained former disposition.
J. H. Wharton.—Dub- lin Hosp. Gazette, '59, ii, s. 8, vi, 202.	35	"	Fell from wagon on head. Fits, intense pain in head, giddiness staggering.	"	Bone normal.	Relieved, weeks.	No fit while in hospital, after operation, 4 weeks. Pain relieved at once, when but- ton was removed.
Jas. F. West, F.R.C.S.— Med. Chir., Tr. '79, Lond., 1880, lxiii, p. 23.	14	F	Struck on forehead by stone. Become drowsy and forget- ful; less intelligent. Fits for past year. Fit 4 days before operation, and has not spok- en since. Urine and feces passed involuntarily.	Trephined over slight depression.	Button showed depres- sion of outer table and compression of diploe. Inner table bone no evidence of fracture.	Improved years.	Mental condition improved and free from fits.
T. G. Richardson.— New Orleans Jour Med., '66, xxi, 494.	12	M.	Struck in middle of forehead; no fracture. Fits for several months. Cerebral functions slow and uncertain; stupid.	Trephined.	Disc of bone appeared perfectly normal and so did dura to Dr. Richardson, but Prof. Stone thought it a lit- tle opaque and thick- ened. Serum in arach- noid which burst through scratch in du- ra.	Cured. Two months.	No spasms after first night.
W. Stone.—New O. J. Med. and Surg. J., '58-9, xv, 433.	53	"	Frequent fits some months.	"	Nothing found, but re- lieved of fits for a time. Trephined again and had no fits for a year or two.	Improved. One to two years.	After second trephining no fits for 1 year, then recur- rence. A third operation re- vealed dura much thickened and firmly attached.
Saxtorph.—Jour. de med. et de chir. prat., '82, p. 103.	20	F	Healthy. Slight bump on head, skin broken. Nine months later first fit re- curred with frequency. Medi- cal treatment of no avail 21 months later.	Trephining.	Operation area sensi- tive, nothing patho- logical found. Anti- septic dressings.	Cured. 3 weeks.	
Soyre.—M. and S. Rep., '61, vi, 358.		M	Blow in occipital region, fol- lowed by epilepsy which re- sisted all medical treatment; confirmed epileptic.	Trephined.	Everything absolutely normal.	Cured. Almost one year.	

TABLE I.—CONTINUED.

Operator and Reference.	Age and Sex.	Supposed Cause, and Character of Filt.	Operation.	Conditions Found.	Result.—Time between Operation and Report.	Remarks.
Dr. Andrew Otterson— Case of Dr. Buck.— M. and S. Rep., '64, vi, 358. Louis Bauer, M.D., M.R.C.S., St. Louis Med. and Surg. J., '70, n. s., vii, 205.	M.	Epilepsy following injury.	Trephined.	Everything normal.	Cured.	Remained well "long time."
Mord of Hesanon.— Quoted by Guthrie, Injuries of head af- fecting brain, p. 82.	"	Struck anteriorly to right pari- etal protuberance with a scalp wound. Two years later epileptic fits, several daily.	" "	Not slightest evidence of previous injury; dura also healthy.	Cured. Two mos.	Before operation mind im- paired. Muscular power be- low par; left leg weaker. To all intents and pur- poses patient completely cured, both of epilepsy and other cerebral symptoms; can walk and run.
M. Walther.—Quoted by Guthrie, Injuries of head affecting brain, p. 82.	"	Epilepsy for 6 months.	Trephining.	Nothing abnormal.	Cured.	
Lewis A. Stimson.— Personal communi- cation.	Adult.	Epilepsy for 12 months. Blow on head from stone.	Trephined. " "	No disease found. Nothing abnormal found.	" "	
Guthrie.—Injuries of 23 head affecting brain, p. 80.	"	Fell from second story win- dow; became insane and re- mained so several weeks.	" "	Nothing found.	"	Recovered senses in a day or two and discharged cured.
Referred to by Wm. J. L. Pepper.—Dr. J. Porsyth Meigs, Penn. Hosp. Rep., vol. ii, '69, p. 181.	M.	Fixed pain in head following blow; gradually lost power of right arm and leg; arm became rigid; vision and hearing imperfect; memory affected. Epileptiform convulsions and inconsciousness following blow.	Trephined and ex- plored brain 1887- 81.	Ex-lone and dura both free from disease.	"	In 3 days paralysis had dis- appeared, sight and hearing became normal and she left, cured.

Quoted by	Fixed pain in head from blow. Trephined.	Cured.	"Cured after several years of great suffering."
Rhodes. — Quoted by Guthrie.			
M. Bouchery. — Quoted by Guthrie.	Dull pain in head add hemiplegia.	Nothing abnormal found.	In 56 days patient was quite cured.
D. S. N. Leo. — Am. Jour. Neurol. and Psych., vol. ii, '83, p. 36.	Two cases. Epilepsy.	Improved.	Both cases benefited and resumed work.
Andrew Blake, M.D., M.R.C.S., London M. and Phys. Jour., '56, iv, 103.	M. Blow on right parietal bone with fist; no division of integuments. Persistent headache; epilepsy and left hemiplegia.	Skull thick; but little Cure. Several months later, however, and regained power in left side in less than a month.	Proxysms at once mitigated and ceased altogether in a few hours, and regained power in left side in less than a month.
Dr. Kirkwood. — Br. Med. Jour., Lond., '75, ii, 55.	" Four years ago fell and was stunned. Character changed and 2 years later had fits.	Skull and cortex entirely normal.	Few fits decreased in frequency. Trephined again and fits still further decreased, but temper worse.
Mr. Whitehead. — Br. Med. Jour., '36, i, 107.	" Fell in quarry and sustained fractured skull (compound.) Constant headache, and for 7 weeks epileptic fits.	Nothing abnormal was observed.	Only 1 fit since operation, and free from headache and depression.
W. J. Van Eunan. — Kansas City, '85, vi, p. 470.	" Fell under wheel at 12 years of age. Head passed over head. Four years later fits. Six months later died. Depressed cicatrix; fits for 4 years.	Pericranium perfectly healthy, as was also the dura. A little apparent thickening of bony wall.	Had bromides before and after operation.
D. Macdonald. — Jour. Nervous and Mental Dis., N. Y., '86, n.s. ix, p. 488.	" Fell down stairs at 6 years of age. Fits began at 16 years. Attacks nocturnal, but evidenced by bitten tongue, etc.	Inner surface of bone smooth and non-adherent, and dura not wounded.	"
Reported by A. H. Bennett. Operation by Mr. Gould. — Br. Med. Jour., '97, i, 12.	" Blow on head 6 years previously; fits ever since, averaged one per week.	Portion of bone removed was perfectly normal, as was also the dura; a circular portion of which was incised. Cortex was normal and exploration in 3 directions in each revealed nothing.	5 months. No fits since operation.

TABLE 1.—CONTINUED.

Operator and Reference.	Age and Sex.	Supposed Cause, and Character of Fits.	Operation.	Conditions Found.	Result.—Time between Operation and Report.	Remarks.
Agnew and White. — Case book.	42	M. Fell from horse during wait. Fits began some time after. Increasing in severity. Occasional "maniacal" spells. Scar over left parietal region.	Trephined.	Nothing abnormal.	No fits for 3 months. Then 2 in close succession. Then none for 7 months. Ten months.	In all these cases of Dr. Agnew and myself the bromide doses were given in moderate doses after the operation; but in all of them the bromides had signally failed before operation was attempted.
"	23	" Blow on head from blunt weapon during a fight.	"	"	Cured. ? 18 mos.	No fits for 18 months.
"	13	F. Wound of scalp from fall against a clay flower pot at age of 4 or 5, followed by epilepsy and gradual mental failure. Imbecile at time of operation.	"	"	Relieved. 3 mos.	No fits, although previously they were of daily occurrence. Patient regained intelligence enough to give notice of her desire to evacuate bladder or bowels, acts which she had performed regardless of time or place before the operation.
"	29	M. Wound of scalp and supposed fracture from brick falling on head from a height, ten years previously.	"	"	Cured. ? 2 years.	Fits appeared 3 years after accident; were increasing in number and severity. Averaged 1 in a week or ten days. None for 2 years after operation.
"	30	" Scalp wound with apparent depression.	"	"	Relieved. 4 mos.	Fits before operation averaged 4 or 5 weekly. After operation 1 at end of 3rd month; two during fourth month. Fits before operation once in two or three weeks, but very violent and severe. After operation 1 in several weeks. One at end of 3 months.
"	39	" Gunshot wound of head; supposed fracture.	"	"	" 9 mos.	

Agnew and White, — 34 Case Book.	M. Scalp wound with supposed trephined fracture.	Nothing abnormal.	Relieved 2 mos.	Fits before operation from 1 to 3 daily. None up to time of losing sight of patient.
"	" Scalp wound received at age of 11. Followed by a period of unconsciousness.	"	" 6 weeks.	Fits before operation very frequent and violent, sometimes 3 or 4 daily. After operation none for six weeks, while patient was in hospital.
"	" Fracture and trephining at age of 15. Fits began at 17. Increasing in number and severity.	"	" 11 mos.	Fits before operation 1 to 2 weekly. After operation none for four months, then 1 to 2 monthly. Still under observation.

TABLE II.—LIGATION OF BLOOD-VESSELS.

Operator and Reference.	Age and Sex.	Supposed Cause, and Character of Fits.	Operation.	Conditions Found.	Result. — Time between Operation and Report.	Remarks.
Alexander. — Brain, London, 1882, v. 178.	11	F. Good family and personal history. Fits began five years ago without known cause. Very frequent, lately as many as 12 in one night. Memory failing.	Left vertebral tied Mar. 1, 1882. Left vertebral tied March 29, 1882.	Alexander remarks that in the 21 cases alluded to in this paper, 1 have been quite well for nearly a year; 9 others so free from fits and so free from fits and time, it may be said, is likely to result; and 8 have improved in so many respects, or are improving, that the operation would be justifiable if no better results were obtained. The one who died in a fit, was an accident.	Improved, 2½ mos.	June 5th Improvement very decided. Only 5 fits in last 17 days, and those not severe. Stupidity lessened.
"	11	" First fit four years ago, while at play. Nineteen fits in last seventeen days.	Right vertebral tied March 1, 1882. Improved on this. Left vertebral tied April 26.		" 1½ mos.	From May 9th to June 5th only 3 fits. Ice bag applied to spine May 9th, and retained since. Mental condition improved.
"	23	M. Averaged 35 fits a month. Fits since 5 years of age, brought on by fright it is alleged.	Both vertebrals tied March 29, 1882.		" 2½ mos.	Twenty fits in April, 15 in May, and up to June 6th, only 1 Ice bag to spine from May 9th. Has lost to considerable extent former stupid look.

TABLE II.—CONTINUED.

Operator and Reference	Age and Sex.	Supposed Cause, Duration and Character of Fits.	Operation.	Conditions Found.	Result — Time be- tween Operation and Report.	Remarks.
Alexander.—Brain. London, 1882, v, 178.	23	M. First fit at 14 years, caused by fall; depressed scar at back of head. Wound is not much affected. Averaged 20 fits per month.	Left vertebral tied; July 31, '81. Right internal carotid tied July 27.		Improved. 1 year.	Eleven fits in August, 5 in September, and up to Oct. 8, two slight ones; rest of October, 11 up to Nov. 16th, 1 and up to present; aver- aged 1 per month, 12. Fits milder and temper improv- ing.
"	22	" Fits for eleven years, caused by being beaten by his father; average number 15 per month.	Left vertebral and left common car- otid tied Aug. 31, 1881.		" 4 mos.	Six fits in September, 8 in Oc- tober, 2 in November, and up to Dec. 20, 2 more. Died from suffocation during a fit.
"	26	" Fits since childhood, average 10 per month. At times maniacal as fit is passing off.	Left vertebral tied Aug. 17, '81. Right vertebral tied Jan. 11, '82.		" 9 m 18.	Mental condition improved and maniacal attacks dis- appeared. Fits lessened af- ter first vessel was tied. 3 fits in February, 10 in March 8 in April, 6 in May; much milder.
"	29	" Fits since 13 years of age; average 16 per month. Arm begins in right hand, becomes somewhat rigidly fixed in this position.	Right vertebral tied; Jan. 25, '82. Left vertebral tied Feb. 8, '82.		" 4 mos.	Three fits in February, 2 in March, 10 in April, and 6 in May. Much milder. Mental condition improved; power in arm returned.
Alexander.—Medical Times and Gazette, London, 1882, i, p. 250.	7	" Stupor, howling, tonic. Fits begin at 20 months and have been increasing since. Twelve fits in last twenty days.	Left vertebral tied Nov. 22, '81. Right vertebral tied Dec. 28.		Cure.	Free from fits after 2nd oper- ation up to middle of Feb- ruary; up to May 31st only 1 fit, although a very un- comfortable home.
"	17	" Fits for years in Dingle Mount institution; 289 fits in 1881.	Right vertebral tied Dec. 21, '81.		" 6 mos.	No fits until end of 5 months, when a paroxysm of anger caused some kind of fits; none since.

TABLE II.—CONTINUED.

Operator and Reference.	Age and Sex.	Supposed Cause, Duration and Character of Fits.	Operation.	Conditions Found.	Result.—Time between Operation and Report.	Remarks.
Wm. Alexander, M.D.; F.R.C.S. Medical Times and Gazette, London, 1881, ii, p. 600.	9	M. Epileptic from birth and idio- tic to a certain degree. September, 1880 to June, 1881, 160 fits.	Left vertebral tied July 13, '81.		Cure.	Occasional fits up to Aug. 10. None since. July, 1882, no fits since. (Later report).
Alexander—Brain. London, 1882, v, 170.	24	P. Menes ceased one year ago, and fits soon began. 45 daily.	Right vertebral tied Jan. 18, '82. Left vertebral tied Feb. 2.		Improved. 5 mos.	After first ligature fits contin- ued, but milder. Vessel was snapped 60 days after, second ligation, and occasional fits since. March 6, 1882, reported round ligaments for re- version, few slight fits. No fits after leaving hospital June 20th. Menstruation returned.
"	18	" Fits for 5 years, following severe news of her father's death; petit mal daily; se- vere attack weekly.	Both vertebrals tied Feb. 15, '81.		" 4 mos.	June 6th, few slight fits.
"	25	" Fits since 13 years of age; almost daily.	Both vertebrals tied March 23, '81.		Cured.	Middle of May, no fits since operation.
"	18	" Hip disense since 6 years, of age. Six months ago first fit; average, one every sec- ond day.	Both vertebrals tied Feb. 15, '82.		Improved. 3½ mos.	No fit until March 6th. Two fits in March and 3 in May. June 18, 1.
"	25	" Fits. Seven to twenty-seven monthly.	Right vertebral tied March 16. Left vertebral tied April 12.		" 6 weeks.	Three fits up to May 25.
"	15	" First fit at 15 months; began at 7 years of age; as many as twenty daily.	Both vertebrals tied April 5.		Cured.	April 15 and 16, two slight fits, June 20, no fits since.

Improved. 3 mos.	No fit for a week, and during next fortnight only 7. Up to May 1st, averaged 11 fits a month from 48.5 and these are lighter. Brighter looking and takes more notice.
Cure.	No fits since operation.
"	5½ mos. No fit since.
Much improved. 6 years.	Fits lighter and less frequent. Could attend to business.
Cure.	First ligature diminished fits in force & frequency. None since second ligature.
Cure; lasting 2 yrs, 3 years.	For two years after operation, entirely free from fits, but patient, if exercise is pushed, and any unpleasant mental disturbance, has petit mal, but never loses consciousness.
Cure.	Relief immediate. For over three years exempt from seizure of any kind. Within past year any unusual mental disturbance may cause petit mal, but never loses consciousness and mental condition improved.

Alexander.— <i>Braintree</i> , London, 1882, v. 178.	F. Fits since 8 years, through fright. Fell at 11 years and cut head. After this became an imbecile and did not recognize anyone. 50 fits in 1881.	Left vertebral tied Feb. 7, 82.
J. R. Preston, Esq.— <i>Trans. Med. and Phys. Soc., Calcutta</i> , 1831, v. 359.	M. Severe epileptic fits every two weeks for 5 years.	Ligature of common carotid.
V. Mott, jr.— <i>N. Y. Med. Gazette</i> , 1850, i, 120.	" Incipient epilepsy.	Common carotid tied.
J. R. Wood.— <i>N. Y. Jour. Med.</i> , 3 s., vol. iii, 1857, p. 22.	" Fits for 8 years.	Ligature of common carotid.
T. H. Hamilton, jr.— <i>M.D.—Buffalo Med. Jour.</i> , 1847, i, 119.	" Fits from childhood; from 12 years fits became more frequent, one or two daily.	Tied right carotid Aug., 1838. Left carotid tied Mar., 1839.
Z. Fitcher, M.D.— <i>Ann Arbor, Mich.</i> , 1853, i, p. 8.	F. Fits since 13 years old. Aura first began in right forearm, but gradually traveled up to point of omo-hyoid. At times 24 fits in twenty-four hours.	Common carotid tied below omo-hyoid.
J. R. Brown, Ass't Surgeon U.S. Army.— <i>Am. Jour. Med. Sci., Philadelphia</i> , n.s. xxviii, p. 415.	" Epilepsy since 17 years old. At times as many as 24 in twenty-four hours.	Right common carotid tied June 5, 1848.

CLASS I.—OPERATIONS FOR THE RELIEF OF NERVOUS PHENOMENA.

I may begin the consideration of these cases with a brief statement of my personal experience.

During the past five years Dr. D. Hayes Agnew and I have trephined in 15 cases of supposed traumatic epilepsy. All but one recovered from the operation. In one a bullet was found imbedded in the brain substance. In another an irregular portion of the internal table was dissected out from beneath the dura mater to which it was attached by cicatricial adhesions. In another no spicules of bones projected from the internal surface of the button removed, and an adjacent thickened portion was taken away by the rongeur. In two marked thickening and sclerosis of the cranium in the region of operation were observed. In the fatal case death occurred from suppression of urine, possibly a secondary effect of the etherization. The patient was an imbecile and a confirmed drunkard as well as an epileptic, and was really not a fit subject for operative interference. His friends were notified that it was a great risk with but slight chance for improvement. In the remaining cases nothing abnormal was seen. It was the effect of operation upon these latter cases which, as I have said, led to the preparation of this paper. Without exception they were markedly improved by the trephining, in two instances even to the point of apparent cure, no return of symptoms having been observed for 18 months and two years after the operation.

In the other 7 the results were strikingly favorable, convulsions disappearing for weeks or months, although previously of more than daily occurrence. These cases are included in the table which I present herewith, which is not intended to be complete or exhaustive, but embraces, I think, an interesting variety of extraordinary results from operations which proved to have no justification in any discoverable pathological condition.

A few illustrative cases may be selected from the 154 contained in the table:

Dr. Eastman¹ reported the case of a man who sustained a light blow on the head, stunning him for a time. One year later he had what appeared to be an epileptic fit, leaving him hæmiplegic. Epileptiform convulsions appeared and increased in spite of all treatment, until he had as many as 16 or 18 daily. Trephining was done, but with the exception of a small external depression on the same side of the head as the paralysis, nothing abnormal was found. The paralysis was cured in two or three weeks, and in four weeks he was entirely well. He never had a fit up to the last report, eight years after operation.

Sayre² has reported the case of a man who received a blow in the occipital region, followed by convulsions which resisted all medical treatment. He became a confirmed epileptic. He was trephined, and everything was found absolutely normal. Up to the time of report, one year after operation, he seemed cured.

S. E. McKinley³ has reported the case of a boy, æt. 16, who, after having for years been epileptic, fell through a bridge and had one testicle crushed. It was removed and he had no fits subsequently, the last report being six or seven years after the operation.

W. H. Cane⁴ has reported the case of a man, æt. 24, who had had fits for seven or eight years, averaging three times a week. The operation of tracheotomy was performed and he had no fits afterwards, last report being four months after the operation.

Graham Fitch⁵ has reported the case of a woman, æt. 21, who, at the age of 7, had fallen, striking her head. She was unconscious for a time. Depression in the parietal bone could be felt. An incision was made in the scalp over the depression, one inch in length, and kept open three months. She had one fit immediately after the operation and had none afterwards, the last report being one year after the operation.

Dr. Parish⁶ has reported a case of a young man, æt. 20, who struck his head against a gas-pipe. He had a few fits for a few days after the accident, and these fits returned after eight months. An incision

¹St. Louis Medical and Surgical Journal, 1881, vol. xl, p. 372.

²Medical and Surgical Reporter, 1861, vol. vi, p. 358.

³American Medical Gazette, 1855, vol. vi, p. 295.

⁴London Lancet, 1851, vol. ii, p. 35.

⁵American Practitioner, Louisville, Ky., 1887, vol. xvi, p. 212.

⁶Philadelphia Medical Examiner, 1843, vol. ii, p. 799.

was made through the tender spot on the scalp and a few issue peas were introduced and retained by plaster. There had been no return of the fits up to the date of the report, two to three years after the operation.

Dr. Agnew and I have recorded the case of a man, æt. 23, greatly epileptic, who, years before, had received a blow on the head from a blunt instrument during a fight. Trephining was done, and nothing abnormal was found. He had no fits for 18 months after the operation.

We have also notes in the a case of a man, æt. 29, who had received a wound of the scalp and supposed fracture from a brick falling on his head from a height ten years previously. Fits appeared three years after the accident. They were increasing in number and severity, and averaged one in every week or ten days at the time of operation. He was trephined, and nothing abnormal was found. No fits have occurred up to the present time, two years after operation.

T. H. Hamilton⁷ has reported the case of a man, æt. 18, who had fits from his childhood. From 12 years the fits became more frequent, averaging one or two daily. The right common carotid was tied August, 1838, and the left carotid March, 1839. The first ligature diminished the fits in force and frequency. He had no fits after the second ligature, and remained cured up to last report, two years after second operation.

J. R. Brown⁸ has reported the case of a woman, æt. 22, who had been epileptic since she was 17. At times she had as many as 24 in 24 hours. The right common carotid was tied June 5, 1848. Immediate relief followed. For three years she was exempt from fits of any kind. Then any unusual mental disturbance caused petit mal, but she never lost consciousness and her mental condition improved up to last report, five years after the operation.

The tables may be summarized as follows:

In 56 cases of trephining for epilepsy, nothing abnormal was found to account for the symptoms; 19 cases were reported in 6 months or less after the operation; 11 cases were reported from 6 to 12 months after the operation; 6 cases were reported from 1 to 2 years after the operation; 1 was reported 8 years after the operation; 25 of the above-mentioned cases were re-

⁷Buffalo Medical and Surgical Journal, 1846-7, vol. ii, p. 110.

⁸American Journal of the Medical Sciences, n.s., vol. xxviii, p. 415.

ported as cured; 18 were reported as improved. In 3 of the cases it was mentioned that relapse occurred later.

In 30 cases of ligation of blood-vessels for epilepsy, 23 cases were reported in six months or less after the operation; 3 cases were reported from 6 to 12 months after the operation; 1 case was reported 2 years after the operation; 14 of the above-mentioned cases were reported as cured, 15 were reported as improved; 1 died 7 days after the operation. The right common carotid was tied in this case, and no fit occurred after the operation.

In 10 cases of castration for epilepsy all were reported as cured; 1 case was reported 3 months after operation; 4 cases were reported more than 2 years after operation; in 5 the time when reported was not mentioned.

In 9 cases of tracheotomy for epilepsy, 8 were reported 5 months or less after the operation; 1 was reported 2 years after the operation; 2 of these were reported as cured; 6 were reported as improved; 1 was reported much improved, but died 2 months after operation.

In 24 cases of removal of the superior cervical gangliæ of the sympathetic nerve, 6 of these cases remained well at the end of 2 years; 10 were improved; 5 remained unimproved; 2 died soon after the operation, but not from its direct effects. One was not heard from.

In 6 cases of incision of the scalp for epilepsy, nothing was found to account for the symptoms; 3 of these cases were reported as cured at the end of 3 months or less; 1 was reported as cured at the end of 1 year; 2 were reported as cured at the end of 2 years; 2 other cases, almost similar, are reported as cured.

Twelve cases of epilepsy are reported as cured by such operations as stretching of the sciatic nerve, excision of musculocutaneous nerve, cauterization of the larynx (2), circumcision, application of a seton to back of neck (4), tenotomy of external recti, burning of scalp, puncture of heart, etc.

Thirteen cases of spontaneous or accidental cures of epilepsy are also reported at a time varying from 2 months to 5 years

after the traumatism, which was a fall, a burn, a wound, an amputation for intercurrent injury or disease, etc.⁹

Many of the cases contained in the table are, I admit, open to the serious objection of having been reported too early. I have included them, however, as the benefit following operation was so marked and unmistakable as to be worthy of investigation in spite of its possible want of permanency. Setting them aside, however, we still have left a large number of cases in which there was apparent cure at times varying from three months to three years after operation.

The explanation of these cases is scarcely to be found in the theory that some source of reflex irritation has been removed.

It is well known that in many epileptics in whom a distinct aura exists, if there be induced an interruption of nervous transmission between the skin and the nerve centres, the paroxysms are greatly diminished, or may even disappear.

Dr. Brown-Sequard¹⁰ has collected a number of such cases in which either a diminution of the fits, or, as was more frequently the case, an entire suspension of them took place after the ligature of a limb or finger, section of one or many nerves, amputation of a limb or other part, elongation of the muscles which were the seat of the aura, or cauterization by various means of the part of the skin in which the aura originated.

For many years operations based on this fact have been performed with varying but sometimes surprising success. Billings¹¹ has given a résumé of a number of such cases, including cures by lithotomy, amputation of fingers and toes, nerve section, enucleation of the eye and removal of cicatrices. I have myself had four cases in which the latter operation was followed by such marked benefit¹² that it occurred to me that

⁹Prof. H. C. Wood has told me that having noticed the cure of epilepsy in a domestic animal as the result of a serious fall upon the head from a height he subsequently produced cures in animals similarly affected by inflicting heavy blows with a blunt instrument upon the occiput.

¹⁰"Researches on Epilepsy," etc.

¹¹Cincinnati Lancet and Observer, 1861, p. 339.

¹²In one case, a patient of Dr. Chas. K. Mills, the recovery was permanent and complete, several years having elapsed since the operation.

possibly much of the good effected by trephining in traumatic cases might be brought about with equal certainty and more safety merely by raising the portion of the scalp containing the cicatrix. This I have done in some very recent cases, with the usual result of a temporary disappearance of the convulsions.

The accidental cures of epilepsy, 13 instances of which are included in the table, and the cases of relief from fixed pain afforded by simple trephining, are almost equally striking in the absence of any comprehensible relation between the traumatism and the disappearance of symptoms.

Passing from the cerebral to the spinal region, I will cite only one illustrative case.

A male patient, æt. 55, was attacked December 25, 1887, with severe pains in his arms and shoulders; three or four days later there was weakness of the thighs, spreading rapidly down the legs to the feet, and upward to the nipple line. In eight days there was absolute paralysis of the parts involved, including both sphincters, while at the same time the paralyzed parts became the seat of profound anæsthesia. Girdle pains developed, bed sores made their appearance; percussion of the spine over the third and fourth vertebræ became painful; the reflexes were exaggerated, and slight blows on the head in the direction of the spinal axis gave rise to frightful exacerbations of the girdle pain. These symptoms developed and increased in severity for ten months; all internal therapeutics were exhausted, and it was finally decided to trephine the spine, although one distinguished neurologist was positive we were dealing with a case of Landry's paralysis and that operation was unjustifiable. Dr. Dercum, in whose practice the case occurred, agreed with me that an exploratory operation was indicated, and I, accordingly, on October 17, 1888, removed the spines and laminæ of the first five dorsal vertebræ, opened the slightly thickened dura, separated some firm adhesions to the subjacent pia mater, explored the cord with my finger, and then having quite failed to discover any serious pathological changes, closed the wounds in the dura and soft parts. The girdle pain had entirely disappeared by the following day, sensation began to return in the feet the day after,

voluntary motion in the toes on the eighth day, and so one symptom after another disappeared, until the patient completely recovered, and is now earning his living by manual labor.¹³

Mundé¹⁴ has reported a case in which after removal of the ovaries and Fallopian tubes, symptoms of chronic myelitis of the lumbar cord entirely disappeared, although previously the patient had had an apparent hemiplegia and had for seven years been unable to move even the toes of the left foot. In two months after the operation she was able to walk perfectly and her recovery seemed complete and permanent.

Dr. W. R. Gillette¹⁵ has recorded the case of a German girl who had been in many hospitals for severe dysmenorrhœa, pelvic pains, and epileptic seizures. She professed to live without eating, but it was found that she took bread in some surreptitious manner. The nurses watched her very closely and concluded that she was a hysterio-epileptic. There was prolapse of the ovaries. The patient was very anxious to have an operation done, and her mother stated that doubtless she had been a real sufferer for several years. Dr. Gillette thought it a good case in which to try the influence of mind over matter, and made all the necessary preparations for oophorectomy, placed the patient upon the operating table, made an incision into the subcutaneous fat of the abdominal walls, and closed the wound. The patient improved wonderfully after the pretended oophorectomy.

I shall reserve my comments on these cases until I have completed my records, and shall pass on to the next group.

CLASS II.—ABDOMINAL AND PELVIC DISORDERS.

We may begin one list of these cases with a resumé of Mr. Tait's extraordinary experience. He says¹⁶ that he has more than once drawn attention to the astonishing disappearance of tumors, often of large size, after a mere exploratory in-

¹³ANNALS OF SURGERY, June, July, 1889, July, 1890.

¹⁴Amer. Jour. Obstetrics, Vol. 17, 1884, p. 1162.

¹⁵Amer. Jour. Obstetrics, Vol. 17, 1884, pp. 1164-5.

¹⁶Edinburgh Medical Journal, November, 1889.

cision. They have been chiefly cases of diseases of the liver, spleen and head of the pancreas, but he has seen others where the exact site of origin of the growth could not be accurately ascertained, disappear equally.

He gives the following illustrative cases:

A woman, æt. 30, had a tumor, supposed to be ovarian. On section it was evident that a mistake had been made. It dipped into the pelvis as a glutinous mass but had no connection there. Traced upward it was found continuous with the substance of the liver, to which it was attached by a pedicle 6 or 7 inches in width. An aspirating needle brought only a drop or two of bloody fluid. The wound was closed. She steadily improved, the tumor subsided and five years later was the size of a man's fist.

In another case of violent hepatic pain, jaundice, etc., the liver was found covered with small seed-like bodies which were thought to be miliary abscesses. Nothing was done. She immediately improved; and entirely recovered.

In another with hepatic symptoms, large, hard nodules of the liver were found and appeared to be undoubtedly carcinomatous. No attempt at removal was made. Recovery was prompt and complete.

In another a large indurated immovable mass in the position of the head of the pancreas was thought to be unquestionably cancer. The history and general appearance of the patient corroborated this diagnosis. Nothing whatever was done, but in a few days the patient began to improve and in seven weeks not a trace of the tumor was to be felt. She has remained in robust health.

Four times Tait has opened the abdomen for the purpose of removing enlarged spleens and in every instance has been deterred by the apparent hopelessness of the case. In three of the four patients the tumor disappeared and the patients regained perfect health.

He has seen a myoma disappear after an abdominal section intended for its removal, yet where nothing was done except handling the tumor with the result of deciding that it was irremovable.

This experience has been recently confirmed at a meeting of the Imperial Royal Society of Physicians, of Vienna, where Prof. von Mosetig showed a case of myo-fibroma of the uterus, from which the patient had suffered since February, 1888. She had severe pains in the sacral and pelvic regions, as well as constipation, difficulty in micturition, and metrorrhagia. Examination revealed the presence of a solid and elastic tumor, which was quite fixed and filled the poste-

rior cul-de-sac. At the request of the patient, who was anxious to have something done, exploratory laparotomy was performed on October 7. On opening the abdomen, a tumor, as large as a man's head, and quite immovable, was found; it filled the large and the small pelvis, and was close to the sacrum. When the tumor was exposed it presented a peculiar appearance; it became congested, assumed a dark-red color, and spontaneous rupture of blood-vessels took place in some spots. As operation was not indicated under such conditions, the abdomen was closed. The abdominal wound healed without any trouble, and the patient said that the pain and discomfort were less than before. When she was examined a second time, fourteen days later, they were not a little astonished to find that the tumor had shrunk to half its former size, being scarcely as large as a child's head, and the tumor had become movable. It continued to diminish in size, so that when the patient was presented to the Society it was scarcely as large as a man's fist. Prof. von Mosetig did not know of any similar case in medical literature. He explained the occurrence by the supposition that the disappearance of the myo-fibroma was due to the intense hyperæmia which had been observed during the operation, just in the same way as soft sarcomata may disappear under the influence of severe erysipelas, etc.

Tait has had several cases in his own practice where such disappearance has been completely effected; but adds that unfortunately he knows of a very much larger number where no such result has been obtained; and that, therefore, whilst no dependence can be placed on mere exploratory incision as a method of treatment, this strange fact, coupled with many of a similar kind, constitutes an argument for the free application of the principle of exploration.

Another case may be given in his own words:¹⁷ The lady was a Jewess, æt. 34, in whom a large myoma had been diagnosed by the late Dr. Schroeder, of Berlin, and others, and in that opinion I certainly agreed when she was brought to me in May, 1888. From the tumor she was suffering very little, and was hardly conscious of its existence, but she suffered much from a gall-bladder full of concretions, and this was the immediate cause of her being sent to me by Prof. Gluge. I performed cholecystotomy a few days after I saw her first, at which time the myoma reached quite half way up to the umbilicus. I did not, of course, go anywhere near the tumor at the time of the operation—did not touch it. I saw her again a fortnight ago (November, 1889), and found to my delight that the myoma had

¹⁷Diseases of Women and Abdominal Surgery, Vol. 1, 1889, pp. 192-194.

receded into the pelvis, and was certainly not one-third of the size it had been six months before. There could be no other known cause of its reduction than the abdominal section, as no kind of treatment had been directed towards it—as a matter of fact, the patient had forgotten all about it.

The history of cases of tubercular peritonitis treated by abdominal incision is now so well known that it need not be gone over in detail.

König¹⁸ has recently summarized 131 cases of peritoneal tubercle treated in this manner. Of these 89 were cured, 23 were greatly improved. Of the 89 cures 30 exhibited no signs of intra-peritoneal tuberculosis several years afterward.

Spencer Wells has reported one case of twenty-five years' standing, Schücking one of fifteen years, and Stelling one of thirteen years.

As to the method by which these results were obtained, examination of the cases shows that there was only one condition common to all; that is, the belly was freely opened, and a certain amount of intra-peritoneal manipulation was practised. In some cases the incision was merely diagnostic; in others the liquid was evacuated as freely as possible; in still others, more radical surgical measures were adopted, curette, scissors and knife being used. All of these measures were followed by cure. Even the employment of anti-bacterial agents, often considered the sole factor in the favorable result, seems to be absolutely without influence. In eighty cases the abdominal cavity was washed out with antiseptic solutions, or sprinkled or rubbed with iodoform. In fifty cases no anti-bacterial agents were employed. Apparently a greater percentage of cures followed where no disinfectants were used.

A question of major importance is as to whether only certain forms of peritoneal tuberculosis can be cured by section. As is well known, the effusion may be serous, sero-fibrinous or purulent; may be circumscribed or diffuse. The tubercles may vary in size, being miliary in one case, in another as large as a hazelnut. The peritoneum may be smooth, roughened,

¹⁸Centralblatt f. Chirurgie, No. 35, 1890.

thickened or covered with pseudo-membrane. In so far as clinical studies go, it would seem that all these different forms of tubercular peritonitis have undergone resolution after abdominal section, and consequently that they are all curable.¹⁹

Professor Annandale²⁰ has reported a case in which long-standing gastric symptoms were completely relieved by abdominal section and the raising up of depressed ensiform and costal cartilages. A young man, eight years previously, had received a severe blow upon the left side over the lower cartilages and sternum; dragging pain in the region of the stomach with vomiting had resulted, and continued, in spite of treatment, with more or less aggravation. Being unable to work, and the diagnosis from external examination not being satisfactory, an abdominal incision was made as if for gastrostomy, and the parts explored; no condition except a morbid depression of the lower costal and ensiform cartilages being found, these cartilages were divided and raised up. The result was complete relief to his old symptoms, and the patient, when seen two weeks ago (nearly six months after the operation), remained quite well.

In the discussion which ensued, Mr. Bryant said that he felt it difficult to criticise such cases, which belonged to a class unfortunately becoming more common, where operations of exploration or discovery were undertaken with failure to find out more than was known before, though in many cases results were obtained in ways we could not explain. Such cases were interesting, but dangerous, tempting the rashers ones to explore more freely than should be done.

One could hardly think that the depression of the cartilages gave rise to all the symptoms described, and he thought surgeons should be grateful to Professor Annandale for placing such a case on record.

Mr. Trèves, in the same connection, referred to the remarkable improvement which sometimes followed after exploratory laparotomy in apparently hopeless cases. He had seen a case of tubercular peritonitis get well after simple exploration. He had twice opened an abdomen, discovered pyloric cancer, and closed again without interfering with it; one man was substantially better in every way for ten days; the second underwent so remarkable an improvement that there was a doubt of the diagnosis; he continued better for six weeks, and then the old symptoms returned and he died, the necropsy revealing extensive carcinoma.

¹⁹Univ. Med. Mag., November, 1890.

²⁰London Lancet, 1889, vol. i, p. 330.

Mr. B. Jessett related the case of a man, *æt.* 45, who suffered with severe and continuous vomiting, and pyloric cancer was thought to be present. He had a large reducible hernia of 25 years' standing, for which he had never worn a truss; after radical cure of this he made a perfect recovery.

Professor Annandale quite admitted his inability to explain the reason of the result obtained, and he related a case in which distressing renal symptoms were present, which were cured by a negative exploratory excision.

The following cases have been briefly furnished me in response to letters of inquiry, many of them not having been published previously:

I can recall but two cases, both of which were operated upon some years since by our friend, Dr. H. F. Campbell, I being with him both times.

The first case was one of intestinal obstruction with great abdominal tympany and with tenderness generally diffused over the whole abdomen. Laparotomy was performed by an incision of three to four inches. Patient slowly but steadily recovered.

The second case was one of perityphlitis, due to over-indulgence in blackberries. There was complete intestinal obstruction, fever and some distension. Suffering intense. Tympanitis and tenderness in right iliac fossa. Exploratory laparotomy was done. An aspirating needle inserted at several points failed to reveal the existence of pus. Peritoneum not incised. Wound left to granulate. Patient made an uneventful recovery.

JNO. S. COLEMAN.

Augusta, Ga., March 21, 1891.

I have had two cases of fibroid tumors of the womb as large as the adult head, dwindle down almost to an inappreciable size after an exploratory incision. In each instance the object of the operation was the removal of the ovaries. But they lay behind a universally adherent tumor and could not be touched.

WILLIAM GOODELL.

Philadelphia, March 27, 1891.

I opened the abdomen in a young primipara in her sixth month for severe constant localized pelvic pain, thought to be due either to a pyosalpinx or an appendicitis. Nothing whatever abnormal was found. The wound was closed. Pain disappeared entirely.

Philadelphia.

BARTON C. HIRST.

A young woman, æt. 24, suffering from obstruction of the bowel, had fecal vomiting for three days before operation. She had been suffering slight pains in the abdomen for a long time but nothing to prevent her from going to her work.

I was asked to operate for the relief of the obstruction. There was a tumor of considerable size extending from the left side of the pelvis, where it was most prominent, then spreading over the entire abdomen. An incision two inches long was made down to the tumor or mass and a plucky effort made to find out what it was; failing in this, the incision was extended to eight inches and the abdominal wall released with great difficulty from the tumor, from crest of ilium to crest of ilium and from pubes to diaphragm, the adhesions being almost as strong as the skin itself. With fingers and knife I continued the dissection into the mass without seeing a single knuckle of intestine or any landmark to indicate their presence. After one hour of continuous effort at investigation with considerable loss of blood, I concluded I had done all within the bounds of safety; that it would be better to let the patient recover from the ether and the disease destroy her than to continue the operation under the hopeless outlook with the prospect of having her die on the table. The wound was carefully cleansed and sutured and the opinion given she could not possibly live longer than a few days. The patient reacted well from the ether, was nourished by the bowel, on the second day had natural movement from the bowels and, now, eight weeks after the operation, is rosy, bright and well, with a small tumor in the left groin. MORDECAI PRICE.

Philadelphia, March, 1891.

I have opened the abdomen in two cases when I did not know what the matter was and don't now, but the patients both got completely well. One appeared to be malignant and for that reason upon the advice of all present I abandoned the operation and told her husband I thought she would die. She got well and has since had a baby and is now in good health. The other had been in bed six months with what all diagnosed as chronic peritonitis. I did find a few adhesions, which I broke up. The uterus and ovaries were all right. She got well.

Jos. T. JOHNSON.

Washington, D. C., March 24, 1891.

A young woman, multipara, consulted me in my clinic, complaining of the most intense pain in the left ovarian region. She really was in

agony. This continued for quite a long time, several weeks if I remember correctly, before I determined to operate. She lost flesh and strength, was bedridden, had temperatures from 101 to 103, could not be touched in the ovarian or hypogastric region without causing a scream.

On opening the abdomen, which I had determined upon, because at the time of my first examination and also subsequently, an indefinite fulness was felt resembling a distended Fallopian tube, absolutely nothing was found to account for a single symptom. She was merely washed out and sewed up again. Recovery in every respect was prompt and perfect *

H. J. BOLDT.

New York City, March 9, 1891.

I have known of instances where livers were tapped for abscess of the liver without pus being found, when both the doctors and attendants and the patients have thought it had been beneficial, and in the *London Lancet*, some years ago, I saw cases mentioned of similar character.

J. M. DaCOSTA.

Philadelphia, Pa., March 23, 1891.

A patient of mine had every appearance of an ovarian tumor. Dr. Joseph Price and Dr. D. Hayes Agnew were called in and after careful examination and consultation we all thought the history of the case and the other symptoms justified ovariectomy.

Dr. Price performed the operation. When the abdominal section was made, to our surprise, it was a lipoma which was cut through and we found nothing else. Under the tonic influence of the knife by cutting through it in the course of time it entirely disappeared leaving

*John G. LeConte, M.D., Savannah, Ga., reports the case of a colored woman, æt. 29, stunned by lightning. Menstruation perfectly regular prior to the shock; afterwards very irregular, there being sometimes two periods in one month, and sometimes only one in two months. Quantity much diminished.

Also the case of a colored woman, æt. at least 70, also shocked. The catamenial discharge which had, in accordance with the ordinary arrangements of nature, ceased for more than 20 years, was completely re-established. At least a discharge from the genital organs, having all the obvious and sensible physical character of the catamenia and observing with rigorous exactitude its peculiar law of periodicity was established and continued to recur until the date of the report—over one year. She had not missed a single period. Her mammæ underwent a preternatural enlargement. The electric shock likewise completely relieved her of a troublesome stranguary which had harassed her for four or five years.²¹

²¹N. Y. Jour. Med., 1884, iii, p. 296.

the patient quite well and relieved of the burden of what we supposed was an ovarian tumor. The patient was benefited by the operation, although no part of the fatty tumor was removed. D. F. Woods.

Philadelphia, Pa., March 24, 1891.

A lady somewhat well along in years, under the care of Dr. W. C. Bailey, of Albion, New York, during the past few years of her life presented a most remarkable case of fibrinous or membranous enteritis. These features of her case will be reported in due time by Dr. Bailey. With him I saw her several times, and when I first saw her she was irrational a large part of the time. She presented crises of pain in the hepatic region with a marked area of tenderness, and apparently a little swelling, and her general condition and history as well as the local conditions made it very probable that we had to do, for one thing, with a case of abscess of the liver. I introduced a long exploring needle, and while not finding fluid pus, I nevertheless withdrew with the needle cells, which, under the microscope, were so strongly suspicious that I advised operation; this was done a little later, a free incision being made just below the costal border; after reaching and exposing the liver I punctured at least six times in different directions, and to considerable depth, with a still larger exploring needle, but failed to find any pus. The gall-bladder contained a few calculi, but inasmuch as, so far as we could see, she had never suffered from their presence, I left them there undisturbed. The exploratory incision healed by first intention, and, to our surprise, from the day of the operation all her pain and local tenderness subsided and never recurred. She and her family were always strongly of the belief that her relief from her distressing condition was due entirely to the operation which had been performed, in which view naturally we could not but coincide.

This is the most marked demonstration of the possibility of such cases as those to which you refer that has ever come under my notice. Of course like yourself I have trephined for intense headache when I found nothing which would be generally considered pathological, and yet with relief of pain. So also in operations on various nerves, we seldom if ever find the actual cause of pain, although the latter symptom we relieve.

I have had another case of obscure liver disease in which jaundice and pain vanished almost from the hour in which a number of exploratory punctures were made from the outside, in the endeavor to detect pus if present. This lady even places such an exaggerated estimate

on the slight service as to state to her friends generally that I had saved her life by the little operation.

Aside from this I have repeatedly seen marked benefit from puncture with the exploring needle, especially in the ileo-cæcal region. I have in mind at the present moment three cases where I was called in consultation to ascertain whether we had to deal with a perityphlitic abscess. The signs being indefinite in each of these cases, I made several punctures with the hollow needle, and as above, in every instance there was diminution of pain from the time of the puncture, while speedy resolution of the inflammatory exudate seemed to have been provoked by the slight mechanical result. From these and similar experiences following the use of the needle, I have learned to regard it and speak of it almost as did Pancoast of his antiphlogistic touch of the knife.

ROSWELL PARK.

Buffalo, N. Y., March 15, 1891.

Some time ago I operated upon a patient for salpingitis. Subsequently the woman returned complaining of a renewal of her old pelvic pains. On looking up her record I found it stated that only one tube had been removed. I concluded therefore to repeat the operation on the other side. After making incision I was greatly surprised to find both tubes had been removed in the first operation, and that the history was incorrect. I accordingly closed up the abdominal incision and was not a little astonished to find that the patient subsequently declared herself to feel perfectly well, and has, I believe, had no return since of her distressing symptoms.

WILLIAM T. LUSK.

New York City, March 18, 1891.

I opened the bladder by the perineum; found nothing; wound stayed open for several months; symptoms relieved.

I opened the abdomen, and found an irremovable tumor; symptoms relieved; tumor shrank.

D. W. CHEEVER.

Boston, Mass., March 8, 1891.

Two well marked instances of restoration to health following simple laparotomy have been met with in my experience.

Two years ago, I was called to a distant town to remove a tumor from a lady's abdomen, the character of which was uncertain. After seeing the case and making a thorough examination which did not disclose its nature satisfactorily, I advised against an operation. So much pressure was brought against this decision by the family physician and

the friends of the patient, that I finally concluded to make an exploration. It proved to be a very soft mass of large size connected with the uterus, and probably a soft myoma. I had with me neither the assistance nor the means to make a hysterectomy, so I refused to go any further and closed the wound; the pain from which she suffered was entirely relieved and within a year the tumor entirely disappeared. The patient was about 35 years old.

The second case happened about eight months ago and the patient was suffering from a tumor in the abdomen of large size in or about the liver; the margins of the tumor reached below the umbilicus. The man was in great pain and was emaciating rapidly. An exploratory operation was determined upon with the hope that the difficulty would turn out to be an abscess of the liver. An examination of the mass after it was exposed, disclosed it to be the liver itself immensely enlarged. It was perforated in several directions with the aspirator and no pus found. The man recovered from the operation without mishap; the enlargement decreased so rapidly that in six weeks' time the liver was of normal size and the patient resumed his usual occupation.

I have records of four cases of entire recovery after laparotomy had disclosed the presence of tuberculosis of the peritoneum without the removal of any organ or tumor.

CHAS. T. PARKES.

Chicago, Ill., March 6, 1891.

I cannot remember more than one case that it seems to me would come under the category of those that you wish. That was a case which I saw last summer of a young girl *æt.* 14, whose menstruation was stopped somewhat abruptly by exposure to cold, and who had, following that, a severe attack of pain in the lower part of the abdomen. A cake appeared in the central line of the abdomen over the pelvis and her fever ran very high, 104° and over.

When I saw her after three or four weeks she was running this high temperature and there seemed every reason to believe that there was pus in the middle of this cake. I made a laparotomy for the purpose of evacuating the abscess if I could find any, but found all the pelvic organs fastened together in one mass by inflammatory exudation. Tried to find pus in some parts of it by puncture with the aspirating needle without success, and finally closed the wound without having apparently accomplished anything.

From the time of the operation she got rapidly better, and the mass disappeared, until, finally, this winter she has been perfectly well, rid-

ing over rough roads in North Carolina, and with no return of pelvic symptoms.

I have known of one or two cases somewhat similar to this occurring in the experience of others where a similar exudation disappeared after operation, or puncture with an aspirating needle. I hope that this case will come into the line that you are investigating.

Boston, Mass., March 13, 1891.

A. T. CAROT.

I operated some years ago upon a man for supposed stone in the bladder. He had all the symptoms of calculus and I thought I felt it before cutting. I found no stone but the man got well and never had a return of his old symptoms.

Among my laparotomies I have in two cases opened the abdomen, found the ovaries healthy, closed the abdominal wound without removing these organs. Both of these cases recovered from the operation and got rid of the various neurotic symptoms which before the operation had almost completely disabled them. The moral effect in these three cases cured the patients.

HUNTER MCGUIRE.

Richmond, Va., March 6, 1891.

CASE I.—Married gentleman, æt. 44, for about one year suffered from attacks of severe abdominal pain which by two or three physicians were regarded as hepatic colic. These paroxysms became more frequent and prolonged and seriously impaired health. One was especially severe and being associated with an icterus and of long duration was regarded by his physician and a consultant as an instance of impacted chololith.

The abdominal wall was incised obliquely in such a manner as to have the base of the gall bladder correspond with the middle of the four inch incision. This viscus was found to be normal, contained no calculi and possessed a patulous duct. The incision was closed with silver wire, union was somewhat tardy, due to granulation, but never since, now nearly seven years, has there been a return of the trouble.

CASE II.—A German, æt. 46, had chronic diarrhœa with abdominal tenderness and with a recognizable resistance and sense of hardness over hepatic flexure of colon and a little below and across. Malignant disease of this flexure was diagnosticated and palliative means of relief instituted. After a time, some 8 or 10 weeks, severe paroxysmal pains having developed and been suffered until they seriously impaired health, an exploratory incision was consented to with the full knowledge of patient that perhaps nothing could be radically done. The

incision was made in the linea alba and the upper third of ascending colon, its hepatic flexure and half of transverse portion found to be universally carcinomatous. The omentum major was largely involved. Incision closed with silver wire; stitches removed within eight days, union perfect. The intense paroxysmal pains did not recur and from their total relief the patient actually temporarily gained in flesh and strength. In the course of a few months the malignant trouble manifested itself in its usual manner and exhaustion terminated the scene.

CASE III.—A German lady, æt. 47, from whom 4 years before I removed an almost universally adherent ovarian cyst, again consulted me for the relief of severe abdominal pain. This was paroxysmal and at times so intense as to cause mild shock. The line of incision of original operation felt nodular and hard, and several sharply defined ovoid masses, movable under abdominal wall, were easily discernable. As the original cyst, which weighed $37\frac{1}{2}$ pounds, had on its inner wall about half a dozen small wart-like protuberances, not larger than a pea, I diagnosed carcinoma of omentum, and advised another laparotomy. The cicatrix of the first operation with all the involved abdominal wall was excised and the omentum removed close up to the colon. The retro-peritoneal lymphatic glands were, for obvious reasons, untouched, although they were large and bulged well into the abdominal cavity. Incision healed promptly, and, notwithstanding the large lymphatic masses left remaining, the severe paroxysmal pains never again occurred. She ultimately died of total occlusion of the bowel and the exhaustion of general malignant disease.

CASE IV.—A poor woman applied to an eleemosynary institution for relief of an exceedingly painful abdominal tumor (solid). An incision in the linea alba disclosed retro-peritoneal sarcoma. Incision was closed after doing nothing but dusting iodoform over peritoneum, and while everything was left untouched the pains never again occasioned suffering. The malignant disease ran its course and terminated life in a few months, but that conspicuous element, severe neuralgic abdominal pains did not recur.

HENRY BEATES, JR.

Philadelphia, March 20, 1891.

In one case I opened the abdomen for presumed multilocular ovarian cyst, but the mesentery was found to be sarcomatous to such a degree as to forbid further surgical interference. Although the woman was supposed to be sinking rapidly prior to the section, she recovered her strength and health to a large degree, and for some six months thereafter she was fairly comfortable. I then lost sight of her, and learned that she subsequently died from other causes.

The second case was one in which I did a laparotomy for supposed pyosalpinx. The tubes were found to be normal and were not removed; the ovaries, however, were undergoing cystic degeneration perceptibly, but were, at my suggestion, left alone, with the intention of treating them by electricity. The woman made a good recovery, and is now in splendid health (five years after the operation) due, as I hold, to the electric treatment, but my friend who furnished the case believes the section to have been the factor working the cure.

Philadelphia, Pa., March 20, 1891.

WM. R. BLACKWOOD.

Man, æt. 55. Typical history of cancer of the stomach. Movable nodule, about the size of an egg, easily felt just below the rib margin in the nipple line of the left side. Patient suffering from intense pain, preventing all rest except that procured by administration of morphia. Vomiting followed immediately upon the ingestion of food.

Exploratory abdominal incision. The peritoneal cavity was filled with serum. The stomach, after very gentle palpation, was found so extensively involved in the cancerous disease that the idea of operation could not be entertained. The parietal wound was closed, without draining away the serum, and healed in six days, no reaction having followed the operation. The patient was not under ether more than of twenty minutes. On regaining consciousness he declared that his pain had entirely left him, nor did it again return. The attacks of vomiting became much less frequent and the patient's subjective symptoms were practically cured. He died two weeks after section from progressive exhaustion.

EDWARD MARTIN.

I can recall a number of cases where lesions were found which could not be removed, wherein the symptoms disappeared for a considerable length of time under the mistaken impression that the lesions had been removed.

I have known menses to disappear and severe dysmenorrhœa with it under the mistaken impression that the ovaries had been removed.

It is my uniform observation in laparotomy, when I have made an exploratory incision for diagnosis and passed a hand, or simply a finger, into the peritoneal cavity, if the patient be kept for a time in ignorance of what has been done, she experiences a notable relief from her sufferings. This I have observed very many times.

In one notable case I had promised the patient and her husband not to subject her to any extra hazards in the removal of her ovaries, and finding these organs buried in very extensive and firm adhesions,

I closed the abdomen with a simple exploration. It was a case of hæmorrhagic and extremely painful menstruation. The menses promptly stopped. She passed eight months without her periods very comfortably in ignorance of what had been done in her case. Her family physician, feeling that she was quite secure, explained to her the situation. It was scarcely a week until the menses returned with the same violent pain as before and she returned to me, determined to take any risk for relief. I tore up the adhesions and removed the ovaries with a prompt and complete cure of her malady.

Rome, Ga, April 7, 1891.

ROBERT BATTEV.

I can recall but one personal case where nothing was found, yet relief was afforded, and that was a case of pleurisy (supposed) with agonizing pain. A few drops of serum were withdrawn by an ordinary hypodermic syringe, but when I introduced the trocar nothing further was obtained, do all that I could, yet the pain was relieved, did not return, and the patient commenced to mend.

I am sure that other cases have occurred in my practice where operations discovered nothing, yet benefit accrued—still I cannot recall them. Of course, I presume that your question does not refer to operations for epilepsy, headache, etc., where nothing was found beyond what was *assumed* to be sclerosed and thickened bone; if you do, I have had two such cases within six months recently, one where the headache, dizziness and inability to do brain work had lasted—increasing much of late—for 26 years, in which complete cure seems to have resulted; the other where *grand mal* has been apparently put a stop to and the *petit mal* almost abolished.

Ann Arbor, Michigan, April 3, 1891.

C. B. NANCREDE.

CASE I.—Operation April 7, 1885. Miss S., æt. 37. Pelvis filled with a fibroid tumor extending upward to within an inch of the umbilicus. Had frequent attacks of peritonitis during last three years. Tumor almost immovable, left ovary can be felt on the front of the tumor; right ovary resting on vault of the vagina beneath the tumor.

Incision four inches in length. Intestines highly congested, considerable ascitic fluid present, tumor firmly fixed by strong adhesions. Washed out the belly thoroughly with hot water and closed the wound. In six weeks the patient was better than she had been for years, the growth of the tumor was arrested, and at last accounts she was still improving in health.

CASE II.—Operated December 16, 1887. Mrs. H., æt. 40. Mar-

ried at 18 years. Miscarried six months later, which occurrence was followed by severe pelvic inflammation; continued in wretched health and sterile until 34 years of age, at which time, she says, a tumor was discovered in her pelvis. Habitual dysmenorrhœa and chronic invalidism have brought her to me. An examination revealed the pelvis full of solid exudates, the uterus firmly fixed

Incision in the linea alba three inches in length. Intestines adherent to the mass in the pelvis, also the tail of the omentum. It was barely possible to pass one finger down into the pelvis behind and to the right of the fundus. Some of the adhesions were broken up, the belly was washed out with hot water, and the wound closed. Healing was prompt, and a year later she was reported very much improved in health.

CASE III.—Operated June 12, 1888. Mrs. U., æt. 41. First confinement followed by two false conceptions. Later conceived and miscarried at four months. For years afterward was the subject of uterine treatment. During several years past has, at intervals, discharged pus from the rectum. Recently an accumulation of pus has discharged through the rectum. Efforts to reach the abscess sac were futile.

A three-inch incision in the median line revealed pelvis filled with exudates. Uterus, tubes and ovaries *en masse* fixed. Cavity irrigated with hot water and wound closed. Healing uninterrupted. I met this woman with her husband the following July so much improved that I did not know her. Later I learned that she had gained 25 pounds and was in excellent health.

R. STANSBURY SUTTON.

Pittsburg, Pa., April 10, 1891.

Dr. John H. Musser²² has reported a case of supposed biliary calculi of five years' duration, followed, at the end of that time, by intense jaundice and the development of a tumor one inch below the margin of the ribs in the right hypochondrium, dull on percussion, hard, tender, not fluctuating and of about the size of an egg, the diagnosis of biliary colic, impaction of calculi and enlarged gall-bladder being confirmed by Dr. Pepper in consultation.

Cholecystotomy was attempted. The gall-bladder could not be found or recognized although a hard mass as large as a fist was discovered attached to the liver, colon and small intestine. Nothing was done except to close the wound.

The operation was followed by considerable hæmorrhage and finally

²²American Journal of Medical Sciences, vol. 88, p. 333.

by suppuration. The patient steadily improved. There was never any more paroxysmal pain, the jaundice disappeared and three years later he was reported as in perfect health.

Dr. William Mastin²³ has reported a case in which an exploratory laparotomy revealed a large, solid abdominal tumor (splenic), but with such vascularity and such dense and extensive adhesions as to prevent removal. The operation was followed by marked improvement in systemic conditions and considerable diminution in the size of the tumor.

G. Volney Dorsey, M.D.,²⁴ has recorded the following case: Male, æt. 40. History, ague. Ague cake. Intense pain in the region of the spleen. Patient clamorous for an operation. Operation September 2, 1855. Incision six inches long. Abdominal muscles, fascia, peritoneum, perfectly normal. Spleen adherent for a space of several inches; hard, somewhat enlarged. Intestine protruded largely during operation; adhesion of spleen broken up. Nothing else done. Perfect recovery. No more pain.

This case is paraded in most text-books as one of *splenectomy*!

Recently M. Routier²⁵ has related an interesting case of laparotomy for jaundice of a severe type. A nurse in the hospital was seized with severe hepatic colic lasting 24 hours. In spite of energetic treatment jaundice set in, the fecal excretions were discolored and the urine almost black. The liver was felt below the false ribs, and the gall-bladder was painful. For a whole month the condition of the patient remained unchanged, and at the end of that time vomiting set in, and the patient became much emaciated. Believing that a biliary calculus was obstructing the bile duct, the surgeon determined to explore the region, and for that purpose laid open the parts by an incision on a level with the inferior edge of the liver. Passing his fingers through the wound he felt the gall bladder, which did not seem in any way distended, and consequently was not obstructed. He passed his fingers then over the inferior edge of the hepatic organ but found nothing abnormal. Before withdrawing his hand he felt the head of the pancreas, but no tumor was discovered there. Finally, he closed the wound, and, strange to say, the vomiting, which had been previously uncontrollable, ceased, and in two days afterwards the jaundice paled,

²³Medical News, March 17, 1888.

²⁴Med. Counsellor, 1855.

²⁵Medical and Surgical Reporter, April 11, 1891.

and in a week the urine assumed its normal color, and the patient speedily recovered. Routier could only explain the happy result by the fact that the massage displaced some mucous collections which had obstructed the flow of the bile.

Dr. Geo. C. Kingsbury²⁶ reports a case of Dupuytren's contraction of the palmar fascia occurring in a man, æt. 45, who had been subject to acute rheumatism, but was otherwise healthy. His father had for years suffered from phalangeal contraction of the ring and little fingers of both hands. The patient was a barber by trade. His right hand had been affected for 12 years and his left for eight years. Two treatments with hypnotism caused the disappearance of the pain, which had previously been severe, and resulted in the complete return of motion to the hands and fingers.

The case was reported two months later and the cure seemed to be permanent.

Dr. W. M. Chamberlain²⁷ reported a case in which the abdominal wall was divided nearly down to the peritoneum, and the wound was then sewed up. Six weeks afterward the patient was entirely relieved of dysmenorrhœa and other symptoms.

I have recently done a pretended laparotomy in three cases with pelvic pain, ovarian neuralgia and distinct symptoms undoubtedly of sufficient severity to warrant a full exploratory operation and probably an oophorectomy. In one case a mass the size of a hen's egg was to be felt to the left of the fundus; in another there was thickening and increased resistance of the broad ligament close to the cornua; in the third nothing definite could be made out by vaginal touch, but the subjective symptoms of pelvic inflammation were very marked. The previous histories were taken and the conditions confirmed by the chief of the out patient gynæcological department of the hospital. My operations consisted of lineal incision down to but not through the aponeurosis; the wounds were immediately stitched with interrupted sutures; no ligatures were applied. A full antiseptic dressing as if after laparotomy was employed. Union by first intention took place. It is too soon to report results, but (the end of a month) two of the three patients "feel like different women," to use their own words. This is not the result of the rest, as they had previously been in bed for some time.

²⁶British Medical Journal, Jan. 10, 1891.

²⁷American Journal of Obstetrics, 1884, vol. xvii, p. 1165.

A subdivision of class 2 includes the operations upon the genito-urinary tract, the most striking of which, in this connection, are those of supposed kidney-stone, in which, symptoms of calculous pyelitis being present, the kidney has been cut down upon, the capsule incised or punctured, no stone discovered and the wound closed, all pain afterward disappearing.

Tiffany's²⁸ collection of cases affords several examples of this sort, a few of which may be summarized. His own case was one in which increasingly frequent paroxysms of nephralgia demanded operation. No stone was found. A scar of the kidney was noticed. The capsule was freely divided. Relief from pain was marked and immediate.

LeDeutu²⁹ operated in a case of continuous pain following several attacks of nephritic colic. Nothing found. Incision into kidney. Complete cure.

Jordan Lloyd, Clement Lucas, Barker and others are quoted in the same paper, their cases being of less value, however.

In a case reported by Dr. James K. Chadwick³⁰, the kidney was cut down upon in consequence of persistent symptoms of renal irritation.

It was normal in all respects. Its pelvis could be easily reached by the fingers, but no trace of a calculus could be found there or elsewhere. A long needle was then passed through the cortex into the parenchyma in various directions in the expectation of detecting a stone, but in vain. All symptoms disappeared.

Dr. Geo. J. Engelmann,³¹ in commenting on this case, said: In one instance, the case of a colleague, I have seen a precisely similar result, in which the operation was performed because all those who had seen the patient, after a careful examination, had determined that the suffering must be due to the presence of a stone. No stone was found, and yet after an apparently useless nephrotomy, although some tenderness remained, the intense colicky pains entirely vanished.

The two following memoranda were sent in reply to my inquiry:

²⁸Trans. Amer. Surg. Ass'n, 1889.

²⁹Bull. de Therap., 1881, p. 343.

³⁰Trans. Am. Gyn. Society, vol. xv, 1889, p. 366-7.

³¹Trans. Am. Gyn. Society, vol. xiv, p. 384.

I have only one such case. It is, like Tiffany's, supposed renal calculus. None found. Patient relieved by the incision.

New York, March 5, 1891.

R. F. WEIR

In 1889, a lad, about 18 years old, with well-marked paroxysms resembling renal colic, was on the medical side of the New York Hospital, and after several attacks was transferred to me. I exposed the kidney, found it entirely normal, and, by the way, noticed distinct, regular, peristaltic action of the pelvis and ureter. Primary union followed. He remained under observation of a nurse in the hospital for many months, and had no recurrence.

LEWIS A. STIMSON.

New York, March 5, 1891.

[TO BE CONTINUED].